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5. Professor Barwich is in charge of all scientific research work at the Institute. In early November 1956, Dipl.Ing. Slotta became his deputy. Barwich did not seem to be very enthusiastic about his work and showed little eagerness to accelerate the setting up of his Institute. He is a decent fellow enjoying his high salary and living standard (nonthly salary of DME 9,000, two cars, a villa, etc.) but having very little scientific ambition. Work at the Institute suffered from the absence of overall planning and clear direction.

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the experience made on the Soviet reactor scheduled to be furnished to the GDR be utilized of the development of small research reactors. Karl Rembusch of the Office for Nuclear Research and Nuclear Technology agreed with this proposal; two representatives of the Technical Department of the SED Central Committee also accepted.

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entitled: "The Elements of Nuclear Reactor Theory" by Samuel Glasstone and Milton C. Edlund, was used as a sort of bible by the scientists working on reacotr theories at Dresden. Work to be undertaken by the group of these scientists was to include general research on the physics of neutrons, material: tests on a limited scale, production of isotopes (phosphorus and sodium), experiments with the so-called "Laufstrecke" (?), and biological research. Barwich also planned to build a subtropical prism with the help of the reactor.

- 6. The following data were available on the research reactor:
 It is to be a light-water reactor with an output of 2 Mega Watt, using a 10 percent enriched uranium. The reactor is of the tank-type which has often been described in Western technical publications. The reactor will probably be furnished by the Elektrosila Firm at Leningrad. The equipment was believed to be very efficient and of very sturdy construction.
- 7. The Cyclotron Department scheduled to be set up at the Institute will be headed by Professor Dr Josef Schintelmeister, who also on the Faculty of Nuclear Physics at the Dresden Institute of Technology. His assistants at the Institute were Dr. Keck²and his wife, besides graduate physicists Home: and Werner. The following data were available on the cyclotron: 12 MeV protons. The cyclotron was also to be supplied by the USSR, but it had not yet arrived by early November 1956. It was expected, however, that it would arrive by May 1957. The cyclotron will also be probably supplied by the Elektrosila Firm in Leningrad. The building for the cyclotron was completed. Schintelmeister had repeatedly been asked to submit his work program for the cyclotron, but he never complied with these requests and showed very little interests in promoting the project. It was believed that Dr. Keck would draw up a research plan for the Cyclotron Department and would become the decisive man in this department. Schintelmeister was interested in the preparation of the lens spectrometer, his assistant Homut and Werner worked on this project at the Dresden Central Institute for Nuclear Physics.

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- 8. Work on the physics of neutrons was to be conducted in the department headed by Dr. Alexander, probably the most efficient scientist of the Institute. He was assisted by a group of five or six scientists including:

 Brehdel, a candidate of science of the USSR, son of the writer Willi Brehdel;

 Gersch, a graduate physicist; and Schubert, an engineer.

 Dr. Alexander built a fast selector; Schintelmeister and Gersch were working on the project of setting up a pulse discriminator. The ultimate objective of Alexander is to do research work on the bais of the N Gamma process.
- 9. Professor Dr. Born⁴ is scheduled to work in the field of radio chemistry. It was believed, however, that he did not like to work in this field. Acting chief of this department was a man with a glass eye. His name was hot remembered. The construction program for this department was believed to be highly unrealistic. A total of 24 hot cells were scheduled to be set up and construction records were requested from the Soviets for this project. When the records did not arrive, a special commission travelled to Leningrad, but they returned without any records. The members of the commission believed that the Soviets themselves did not have construction records for the hot cells involved capable for export. In September 1956, Selbmann and Ulbricht decided on the spot that work on radio chemistry was to be undertaken at another place owing to danger from radiation in Dresden.
- 10. Research work on the physics of solid bodies was also to be conducted at the Dresden Institute. Professor Straeubel of Jena University refused to become chief of this department. During the reported period this department was headed by graduate physicist Hauser. Hauser intends to work in the field of reactor physics. His plans for the Institute headed by him are based on theoretical study; the same applies to the scientific missions which he is going to under_take.
- 11. The workshop available at Dresden was devided into an electronics and a mechanical section. Dr. Helmut Faulstich was armerted to become the chief of this workshop. Prior to November 1956, Faulstich was in the USSR where he belonged to the Buschbeck Hoch organization. The first batch of this group was scheduled to arrive in Dresden in October 1956. Orders had been given by top-level party and state agencies to induce these returnees to remain in the GDR. No expenses were to be avoided in order to reach this aim. Faulstich was to be offered a monthly salary of 5,000 IME. A total of 150 persons were scheduled to be assigned to the workshop. It was believed that the mechanical section of the workshop was excessively supplied with heavy machinery. The electronic section of the vorkshop was to produce equipment which coult not be furnished by the firm of Vakutronik. Hickmann and Ackermann were in charge of the installation of the workshop.

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- 12. Graduate physicist Abel was in charge of all matters related to the protection against radiation.
- 13. The table of organization for the Central Institute for Nuclear Physics envisaged a total staff of 500 persons, including 100 150 scientists. Total construction cost for the Institute was estimated at 60 million. The Institute was still in an initial phase and details of its work program were not yet cleared. The main difficulties experienced so far was a shortage of scientific personnel.
- 14. The Soviet advisor attached to the Institute was an engineer named Ramanov. He was believed to be an efficient technologist who maintained close connections with Moscow and the Reactor Projecting Bureau in Leningrad. It was believed that his main mission was to supervise the setting up of the complex of institute buildings. He was provided with Soviet construction records and it was believed that he was familiar with the service of a research reactor and a cyclotron. After the spring of 1956, Dr. Alexander, two graduate engineers and 15 engineers of the Institute travelled to Moscow via Kamanov in order to undergo a four-month training there on a Soviet reactor located on or near the premises of an old gasworks in Moscow. The training program in Moscow included operations on a reactor, reactor theory and the counting of isotopes. After this group of 18 scientists had returned to Dresden, the Soviets complained that Dr. Alexander had been the only expert of this group. No information was available on the delegation of further German engineers from Dresden to the USSR.
- 15. The arrival of 20 to 30 Soviet specialists charged with the mission of adjusting the cyclotron was expected.
- 16. It was believed that the GDR had not concluded an agreement with the USSR concerning the return of fissionable materials. The burnt out rods may therefore remain at the Institute. A processing of plutonium at the Institute is not envisaged. From a statement made by Barwich it must be inferred that such activities would far exceed the financial capabilities of the GDR. The processing of plutonium was, however, considered, in cooperation with Czechoslovakia, at a place outside Prague. Details on the location of this place were not available.

Data on the Buildings of the Institute

17. The buildings used for the reactor and the cyclotron are based on German designs, and they were received.

German measures and standards in Dresden. Construction work is executed by "Bau Union Sued", and Colonel Brueckner is in charge of construction work. Staff members of the Central Institute for Nuclear Physics are delegated to the construction bureau when construction work on their respective department is under way. These staff members had their office rooms in the "Forsthaus" Graduate Engineer Ackermann together with 5 or 6 assistants supervised the construction of the reactor house. He is probably scheduled to become the chief of team serving the reactor. From statements made by him it is planned to operate the reactor during one shift only.

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| Graduate Engineer Hickmann together with 3 or 4 assistants supervised the construction of the cyclotron house. He was always seen carrying Soviet designs which had been modified so as to answer German standards. Hickmann has the ambition to build a cyclotron at a later date. It is believed that the cyclotron house has been arranged in a faulty way. This discovery was first made by Ramanov when the building had been completed. Selbmann happened to be present on the premises on this day. It was agreed that nobody was to be allowed to stay in the radiation zone outside the cyclotron house. | |
| Office for Nuclear Research and Nuclear Technology | |
| an estimated 50 men were employed Their offices were located on the two sides of a corridor. Graduate Physicist Rambusch; who came from Jena, is this of this office. The names of the following staff members of this office became known: | . 25 |
| Dr. Berfren Winde, deputy to Rambusch; Dr. Rost, in charge of radiation; it became known that he purchased, predominantly for Professor Wilkelm Maches rediation measuring sets in Tressel or Tresselt, in charge of security matters. It was believed that Selbmann was in control of the office. An unusually large number of NVA and VP were seen on the premises of the office and in its library. | 25 |
| It was believed that the Office for Nuclear Research and Nuclear Technology controlled the following establishments: | , |
| a. The institute at Friedrichshagen; | |
| b. The central laboratory for Nuclear Research (ZfK) at Dresden | ų |
| c. The firm of Vakutronik at Dresden; | |
| d. The Trafo- and Roentgenwerk at Dresden; | |
| e. The atomic power plant; and | |
| f. Delivery plants. | 25X |
| the Friedrichshagen institute is said to be located near Berlin Previously sea marks are said to have been designed there. The institute is cloaked in secrecy. There are indications that it is concerned with air pollution. The chief is said to be a new collection. Reportedly, 50 people worked at this institute. Ho information was available on the firm of Vakutronik and the | 25) |
| Trafo- and Roentgenwerk. The atomic power station headed by Prof. Max Steenbeck was reportedly scheduled to be errected on | |
| a lake north of Berlin. Regarding delivery plants, the following firms became known: | |

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| | VEB Zeiss, Jena, Zaehlwerke (department for counting devices); Laborbau Dresden; An unidentified firm in Leipzig which was scheduled to build the cooling tower for the research reactor; and an unidentified firm in Leipzig which was to assemble this reactor. | |
| 20. | the idea to establish a Central Institute for Nuclear Research was basically good. However, the decision to erect such an Institute was mainly motivated by political prestige. First-rate experts capable of efficient planning are not available in the GDR, and the Scientific-Technical Council of the GDR is not qualified to supervise the work done at the Dresden Institute. This Council includes many advisors, it is true, but none of them is very efficient in the field of nuclear research. Work done at Dresden suffered from the fact that it was very difficult to find out who was really responsible for the project. Clear decisions were shunned. Barwich was assigned a mission which he cannot achieve for lack of experience and efficiency in the | 25X1 |
| | field of nuclear research. | 25 X 1 |
| | The young scientists coming from universities are still without experience, and many of them rate politics higher than their scientific work and they allow themselves to be exploited politically. Those engineers who were delegated from industrial enterprise to the Central Institute for Nuclear Physics are disappointed by their sallaries and the work conditions at Dresden and therefore want to return to their previous jobs. On the whole, the prospects for nuclear research work in the GDR were considered to be rather poor and Barwich's health was also believed to be rather weak. | |
| | Comment, For blueprints and list on ditto, see Annex. Comments: | 25 X 1 |
| | 1. First names have been added from records. | 25X1 |
| | Possibly Christian Keck. Possibly Karl Friedrick Alexander. | |
| | | 25 X 1 |
| | Available at the CIA Library are photocopies of a chart of the organization of the Institute of Nuclear Physics and a sketch showing the locations of its buildings. | |
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| 2 | Central Institute for | Nuclear Physics at Dresden | |
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| • | Data on Leading Person | | |
| • | Professor Dr. Barwich time professor in the Institute of Technole | Director of the Institute, at the same Faculty of Nuclear Physics at Dresden, | |
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| | | | |
| _ | Slotta, a graduate ph | ysicist, deputy to Barwich | |
| | Weiss, a graduate phy | sicist, assigned to the group | |
| | working on the reacto Dr. Hessel | | 2 |
| | working on the reacto | sicist, assigned to the group r theories under Barwich. | 2 |
| | working on the reacto | sicist, assigned to the group retheories under Barwich. a mathematician, assigned to the same | 2 |
| | br. Hessel group as Weiss. Professor Dr. Schinte the same time profess | sicist, assigned to the group or theories under Barwich. a mathematician, assigned to the same olimeister, Director of the Cyclotron, at ser in the Faculty of Nuclear Physics at | |
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| 1 | Homit, a graduate physicist, who graduated from the Arbeiter- und Bauern Fakultaet; assistant to Schintelmeister, worked on the lens spectrometer | . 2 |
| , | Werner, a graduate physicist, who did the same work as Hommut | 2 |
| | Dr. Alexander Institute and chief of the Department of Neutron Physics. | |
| | Bredel a candidate of science of the USSR, assistant to Alexander; he was to be transferred to the Institute at Dubna | |
| | Gersch, a graduate physicist Alexander. | |
| | Ing. Schubert, assistant to Alexander, a radio engineer. | |
| | Dipl. Ing, Ackermann, earmarked to become the chief of the craw serving the reactor. He attended a course in Moscow; assisted by five or six fellow engineers, he supervises the building of the reactor house and the workshop. | |
| | Hauser, a graduate physicist in charge of planning work, for the Department of Physics of Solid Bodies; | . 2 |
| | NTORMITTED MATERIAL AND | 2 |
| | Abel, a graduate physicist is in charge of protective measures against radiation at the Institute. | |
| Γ | Ing. Mittag, in charge of administrative work | 4 |
| L | Mrs. Belser, secretary to Mittag. | |
| | | |

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REPORT

SUBJECT

Central Institute for Nuclear Physics at Dresden DATE OF REPORT 3 February 1958

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- 2. The Institute will be assigned two missions. On the one hand, it is to be available as a training Institute to the Faculty of Nuclear Physics of the Dresden Institute of Technology and in this capacity is scheduled to train from 100 to 200 nuclear technologists per year; on the other hand, the Institute will serve as a research center.
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- 4. It is believed that the Institute has mainly been set up for prestige reasons. Efforts were made to recruit the German atomic scientists returning from the USSR for work in the GDR. All their demands were fulfilled, and institutes were built for all those scientists who insisted on having one. Very little consideration was given to the fact if the scientists involved were in a position to run an institute or if adequate scientifically trained personnel were available. The situation was similar for the Central Institute of Nuclear Physics, a State installation, located just outside Dresden. Construction work for the Institute is executed by Bau Union-Sued, and all construction drawings were made on the basis of Soviet standards.

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5. Professor Barwich is in charge of all scientific research work at the Institute. In early November 1956, Dipl.Ing. Slotta became his deputy. Barwich did not seem to be very enthusiastic about his work and showed little eagerness to accelerate the setting up of his Institute. He is a decent fellow enjoying his high salary and living standard (monthly salary of DME 9,000, two cars, a villa, etc.) but having very little scientific ambition. Work at the Institute suffered from the absence of overall planning and clear direction.

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- 6. The following data were available on the research reactor:

 It is to be a light-water reactor with an output of 2 Mega Watt,
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- 8. Work on the physics of neutrons was to be conducted in the department headed by Dr. Alexander, probably the most efficient scientist of the Institute. He was assisted by a group of five or six scientists including:

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- 9. Professor Dr. Born is scheduled to work in the field of radio chemistry. It was believed, however, that he did not like to work in this field. Acting chief of this department was a man with a glass eye. His name was not remembered. The construction program for this department was believed to be highly unrealistic. A total of 24 hot cells were scheduled to be set up and construction records were requested from the Soviets for this project. When the records did not arrive a special commission travelled to Leningrad, but they returned without any records. The members of the commission believed that the Soviets themselves did not have construction records for the hot cells involved capable for export. In September 1956, Selbmann and Ulbricht decided on the spot that work on radio chemistry was to be undertaken at another place owing to danger from radiation in Dresden.
- 10. Research work on the physics of solid bodies was also to be conducted at the Dresden Institute. Professor Straeubel of Jena University refused to become chief of this department. During the reported period this department was headed by graduate physicist Hauser. Hauser intends to work in the field of reactor physics. His plans for the Institute headed by him are based on theoretical study; the same applies to the scientific missions which he is going to under take.
- 11. The workshop available at Dresden was devided into an electronics and a mechanical section. Dr. Faulstich was earmarked to become the chief of this workshop. Prior to November 1956, Faulstich was in the USSR where he belonged to the Buschbeck Hoch organization. The first batch of this group was scheduled to arrive in Dresden in October 1956. Orders had been given by top-level party and state agencies to induce these returnees to remain in the GDR. No expenses were to be avoided in order to reach this aim. Faulstich was to be offered a monthly salary of 5,000 DME. A total of 150 persons were scheduled to be assigned to the workshop. It was believed that the mechanical section of the workshop was excessively supplied with heavy machinery. The Electronic Section of the workshop was to be enabled to produce those equipments which cannot be furnished by the Firm of Vakutronik. Hickmann and Ackermann were in charge of the installation of the workshop.

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- 12. Graduate physicist Abel was in charge of all matters related to the protection against radiation.
- 13. The table of organization for the Central Institute for Nuclear Physics envisaged a total staff of 500 persons, including 100 150 scientists. Total construction cost for the Institute was estimated at 60 million. The Institute was still in an initial phase and details of its work program were not yet cleared. The main difficulties experienced so far was a shortage of scientific personnel.
- 14. The Soviet advisor attached to the Institute was an engineer named Ramanov. He was believed to be an efficient technologist who maintained close connections with Moscow and the Reactor Projecting Bureau in Leningrad. It was believed that his main mission was to supervise the setting up of the complex of institute building. He was provided with Soviet construction records and it was believed that he was familiar with the service of a research reactor and a cyclotron. After the spring of 1956, Dr. Alexander, two graduate engineers and 15 engineers of the Institute travelled to Moscov via Kamanov in order to undergo a four-month training there on a Soviet reacotr located on or near the premises of an old gasworks in Moscow. The training program in Moscow included operations on a reactor, reactor theory and the counting of isotopes. After this group of 18 scientists had returned to Dresden, the Soviets complained that Dr. Alexander had been the only expert of this group. No information was available on the delagation of further German engineers from Dresden to the USSR.
- 15. The arrival of 20 to 30 Soviet specialists acharged with the mission of adjusting the cyclotron was expected.
- 16. It was believed that the GDR had not concluded an agreement with the USSR concerning the return of fissionable materials. The burnt out rods may therefore remain at the Institute. A processing of plutonium at the Institute is not envisaged. From a statement made by Barwich it must be inferred that such activities would far exceed the financial capabilities of the GDR. The processing of plutonium was, however, considered, in cooperation with Czechoslovakia, at a place outside Prague. Details on the location of this place were not available.

Data on the Buildings of the Institute

17. The buildings used for the reactor and the cyclotron are based on German designs, and they were redrafted according to German measures and standards in Dresden. Construction work is executed by "Bau Union Sued", and Colonel Brueckner is in charge of construction work. Staff members of the Central Institute for Nuclear Physics are delegated to the construction bureau when construction work on their respective department is under way. These staff members had their office rooms in the "Forsthaus" Graduate engineer Ackermann together with 5 or 6 assistants supervised the construction of the reactor house. He is probably scheduled to become the chief of the team serving the reactor. From statements made by him it is planned to operate the reactor during one shift only.

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Graduate engineer Hickmann together with 3 or 4 assistants supervised the construction of the cyclotron house. He was always seen carrying Soviet designs which had been redrafted so as to answer German standards. Hickmann has the ambition to build a cyclotron at a later date. It is believed that the cyclotron house has been arranged in a faulty way. This discovery was first made by Ramanov when the building had been completed. Selbmann happened to be present on the premises on this day. It was agreed that nobody was to be allowed to stay in the radiation zone outside the cyclotron house.

Office for Nuclear Research and Nuclear Technology

an estimated 50 men were employed Their offices
were located on the two sides of a corridor. Graduate physicist
Rambusch, who came from Jena is Chief of this Office. The names
of the following staff members of this office became known:

Dr. Winde, deputy to Rambusch;

Dr. Rost, in charge of radiation; it became known that he purchased, predominantly for Professor Macke,

rediation measuring sets

Tressel or Tresselt, in charge of security matters. It was believed that Selbmann was in control of the office. An unusually large number of NVA and VP were seen on the premises of the office and in its library.

- 19. It was believed that the office for Nuclear Research and Nuclear Technology controlled the following establishments:
 - a. The institute at Friedrichshagen;
 - b. The central laboratory for Nuclear Research (ZfK) at Dresden:
 - c. The firm of Vakutronik at Dresden;
 - d. The Trafo- and Roentgenwerk at Dresden;
 - e. The atomic power plant; and
 - f. Delivery plants.

the Friedrichshagen institute is said
to be located near Berlin Previously see
marks are said to have been designed there. The institute is
cloaked in secrecy. There are indications that it is concerned
with air pollution. His chief is said to be one Peters (?).
The strength of this institute was stated at 50 persons. No
information was available on the firm of Vakutronik and the
Trafo— and Roentgenwerk. The atomic power station headed by
ProfessorSteenbeck was reportedly scheduled to be errected on
a lake north of Berlin. Regarding delivery plants, the following
firms became known:

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VEB Zeiss, Jena, Zachlwerke (department for courting devices); Laborbau Dresden; An unidentified firm in Leipzig which was scheduled to build the cooling tower for the research reactor; and an unidentified firm in Leipzig which was to assemble this reactor.

the idea to establish a Central Institute
for Nuclear Research was basically good. However, the decision to
erect such an Institute was mainly motivated by political prestige.
First-rate experts capable of efficient planning are not available
in the GDR, and the Scientific-Technical Council of the GDR is not
qualified to supervise the work done at the Dresden Institute.
This Council includes many advisors, it is true, but none of
them is very efficient in the field of nuclear research. Work
done at Dresden suffered from the fact that it was very difficult
to find out who was really responsible for the project. Clear
decisions were shunned. Barwich was assigned a mission which he
cannot achieve for lack of experience and efficiency in the
field of nuclear research.

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without experience, and many of them rate politics higher than their scientific work and they allow themselves to be exploited politically. Those engineers who were delegated from industrial enterprise to the Central Institute for Nuclear Physics are disappointed by their sallaries and the work conditions at Dresden and therefore want to be turned to their previous jobs. On the whole, the prospects for nuclear research work in the GDR were considered to be rather poor and Barwich's health was also believed to be rather weak.

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Comment, For blueprints and list on ditto, see Annex.

CONFIDENTIAL - U.S. OFFICIALS ONLY 25X1 9. Homit, a graduate physicist, who graduated from the Arbeiterund Bauern Fakultaet; assistant to Schintelmeister, worked on 25X1 the lens spectrometer 10. Werner, a graduate physicist, who did the same work as Homat 25X1 scientist at the 25X1 Dr. Alexander Institute and chief of the Department of Neutron Physics. 25X1 a candidate of science of the 12. Bredel USSR, assistant to Alexander; he was to be transfured to the 25X1 Institute at Dubna Gersch, a graduate physicist assistant to Alexander, 14. Ing. Schubert, assistant to Alexander, a radio engineer. . 15. Dipl.Ing, Ackermann, earmarked, to become the chisf of the crew serving the reactor. He attended a course in Moscow; assisted by five or six fellow engineers, he supervises the building of the reactor house and the workshop. in charge of Hauser, a graduate physicist 25X1 planning work. for the Department of Physics of Folia Bodies; -25X1 is in charge 17. Abel, a graduate physicist of protective measures against radiation at the institute. 25X1 Ing. Mittag, in charge of administrative work 18. 19. Mrs. Balzer, secretary to Mittag. Hilbert, in charge of security measures of the I stitute.

Annex 3 25X1

Central Institute for Nuclear Physics at Dresden

Data on Leading Personnel

| time professor in the Fact | ulty of Mucle | Institute, at the same ar Physics it Dresden, | | 2 |
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| | • • | James de Diemertah | | |
| Slotta, a graduate physic | 187 | deputy to Barvich | | 2 |
| Weiss, a graduate physici | gt | assigned to the group | | ٠. |
| working on the reactor th | eories under | | * * * | |
| Dr. Hessel. | mathematician | , assigned to the same | | 2 |
| group as Weiss. He previo | oualy was att | sched as an economist t | 20 | |
| the College for Beonomic theory for the new course | of 1953. | | | 2 |
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| Professor Dr. Schintelmei the same time professor | in the Facult | A OL MACTES , LUASICS S. | | |
| Professor Dr. Schintelmei the same time professor i the Dresden Institute of | in the Facult | A OL MACISS LUASICS S. | | 2 |
| the same time professor in the Dresden Institute of | in the Facult Technology. | y of Rucies Physics at | | 2 |

- 7. Mrs. Keck, wife of Dr. Keck.
- 8. Dipl. Ing. Hickmann, an ambitious scientist, liai 30n man of the Institute to Bau Union Susd. He adjusted the Soviet reports for the Cyclotron to German measurements and supervises construction work on the building which is to house the Cyclotron. Three or four engineers work under him.

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